The Mesolithic of Western Norway: prevailing problems and possibilities

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Abstract
The landscape and settlement development in West Norway until c. 5200 y b.p. is broadly outlined. An evaluation of the source material reveals lacunae which delimit detailed information on topics such as daily life, mortuary practices and artistic skills. However, the Mesolithic of West Norway holds a rich potential for insight into cultural-historical problems of a superior order, in particular the process of colonization.

Physiography
Western Norway is a country of great landscape variation. Geographically it covers coasts which extend 750 kilometres as the crow flies between the Lista peninsula and the Hitra island, and a ten times longer distance when inshore and fjord areas are included. Island West Norway is separated from East Norway by the main water divide in the high mountains. SW Norway ("Sørvestlandet", the counties of Rogaland and Vest-Agder), forms a southern transitory zone between East and West Norway, and NW Norway ("Nordvestlandet", the county of Møre & Romsdal) a northern transition between West and Mid Norway (fig. 1).

West Norway may be grossly divided into four main zones:
the outer coastal strip, consisting of a multitude of smaller and larger islands which protect the mainland from the open sea. Generally the islands have a low relief, while the mainland is steep and rocky. This is, however, not the case in Jaeren, the large coastal moraine plain in the Southwest;
the inner coast, characterized by islands and numerous inlets, bays and fjord entrances leading to areas with valleys and mountains;
the fjord and valley zone, consisting of alternating steep mountain sides and areas with more gentle slopes. The longest fjord, Sognefjorden, is 150 kilometres along its main axis;
the high mountains, between and behind the fjords, generally reaching c. 800 to 1200 m a.s.l., with peaks protruding 1500 to 2500 m a.s.l. The mountain area is characterized by a multitude of lakes and rivers and a few glaciers.

Landscape history
Ice recession
Unlike Jutland and most other parts of continental NW Europe, Norway was totally ice-covered during the final stage of the last glaciation.

The outer coastal strips of SW and NW Norway were deglaciated probably as early as 15,500 and 12,500 y b.p. respectively (Anundsen 1985, Rye et al. 1987), which makes the ultimate possible dates for postglacial human enterprise in Norway.

The final ice recession from the coast and lowland started in the transition between the Younger Dryas and Preboreal chronozones, 10,000 b.p. Around 9800 b.p., the ice front was positioned at the head of the Hardanger and Sognefjords, and by about 8500 b.p. all inland valleys and mountain areas were completely deglaciated (Andersen 1980) (fig. 2).

Therefore it should be logical to expect pioneer inland exploitation to be at least two or three thousand years later than that in coastal areas.
due to extensive research projects carried out, in particular by the palaeobotanical milieu in Bergen since the late 1930's. Supported by radiocarbon datings and inter-Scandinavian coordination, a biostratigraphic Bltn-Seemander based chronology was developed twenty years ago (Mangerud et al. 1974). In a slightly modified form it is still the basic framework used by natural scientists.

So far, archaeologists have been reluctant to adopt this chronological system. However, because archaeological units are strongly influenced by non-cultural factors — and absolute archaeological units, distinct in time and space, probably never existed (cf. Bjerck 1986) — the use of the chronostratigraphic zonation should be strongly recommended.

Archaeozoology
The zooarchaeological record is still highly arbitrary, as osteological material is almost completely lacking in Mesolithic sites in Western Norway, except for some few rock shelters and stratified open sites, and off-site natural bone assemblages in beach sediments and waterlogged deposits seldom occur. Not one single Rangifer tisanus bone fragment has, for example, until now come to light from the countless number of Mesolithic “reindeer hunting” sites investigated in the mountains during the last three decades. A useful, however incomplete, fauna historical survey is now being put together for Southern Norway (Lie 1986, 1988 & 1990).

Palaeo-ocenography
Mainly as a result of concern over the greenhouse-effect, and partly as byproduct of oil exploration activities in the North Sea, knowledge of the Late Pleistocene and Early Holocene marine environmental factors such as sea temperature, salinity and circulation patterns, has increased (i.e. Jensen & Bjørklund 1985, Rokoengen et al. 1991, Zahn 1992). This kind of research will, no doubt, also be of value for the understanding of Mesolithic sea resource utilization and coastal settlement patterns in West Norway.

The archaeological record
The database presently available for direct cultural-historical interpretation of the Late Weichselian and Early Holocene, can be characterized as fragmentary, incoherent and partly contradictory. Just a handful of Mesolithic graves, or possible traces of burials, have been found. Other closed find categories such as votives and deposits are practically nonexistent in the record, and few — if any — naturalistic rock art localities depicting game or hunting scenes can beyond doubt be dated to the Mesolithic, which chronologically covers the period until c. 5000 radiocarbon years B.P.

Table 1. Recent chronological sub-divisions of the Mesolithic in Southern Norway.

<table>
<thead>
<tr>
<th>Radio-carbon years B.P.</th>
<th>Chronozone</th>
<th>West Norway</th>
<th>East Norway</th>
<th>Radio-carbon years B.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000</td>
<td>Boreal</td>
<td>Fossa</td>
<td>Fossa</td>
<td>Phase 1</td>
</tr>
<tr>
<td>8000</td>
<td>Boreal</td>
<td>Fossa</td>
<td>Fossa</td>
<td>Phase 2</td>
</tr>
<tr>
<td>7000</td>
<td>Atlantic</td>
<td>Fossa</td>
<td>Fossa I</td>
<td>Phase 3</td>
</tr>
<tr>
<td>6000</td>
<td>Sub-Boreal</td>
<td>Fossa II</td>
<td>Fossa II</td>
<td>Phase 4</td>
</tr>
<tr>
<td>5000</td>
<td>Sub-Boreal</td>
<td>Fossa III</td>
<td>Fossa III</td>
<td></td>
</tr>
</tbody>
</table>

Except for a few rock shelters and caves (e.g. Bøe 1934, Løtk 1951), sites with well-preserved organic material are virtually unknown. A settlement site with a deep, stratified cultural layer containing overwhelmingly rich osteological remains, recently investigated in Koteilen in the maritime surroundings of Bergen (Olsen 1992), does, however, prove the existence of highly informative open sites in West Norway.

Vegetation history
The Late Glacial and Early Postglacial vegetation and climate development in West Norway is well known...

Sea-level fluctuations
The furrowed, weather-beaten coasts of western Nor-
way have experienced two main transgressions; a Late Weichselian displacement in the Younger Dryas around 10,500 b.p. (Amundsen 1985), and an Early Holocene displacement, commonly labelled the Tapes transgression, between c. 9000 and 6500 b.p. (Haflsten 1979).

These transgressions clearly distinguish West Nor-
way from East and Central Norway, which underwent a continuous shoreline rise through the Postglacial period. Accordingly, Mesolithic sites inundated and eroded by transgressions form a special West Norwegian phenomenon (Bjerck 1986). As do Mesolithic sites sealed and preserved by the same natural agents (Bang-Andersen, this volume).

Cultural history
Mesolithic research in West Norway has made considerable progress in spite of the inevitable problems relating to the shortcomings of the source material. During the 1970's the Mesolithic settlement in the interior was extensively studied in two interdisciplinary research projects (Ingerid et al. 1978, Ingerid 1986, Bang-Andersen 1989). Through a large number of totally excavated and well-dated sites, and comprehensive pollenanalytical work, the cultural and natural history of the mountain area gradually became better known than their coastal and lowland counterparts.

From 1980 and up to the present date the main efforts have been focused on Mesolithic and Neolithic...
chronology and settlement development along the coast, to a large extent accelerated by plans for oil-related industry or new road systems along the coast.

A number of local or regional analyses of general interest have come into print, mostly in Norwegian (e.g. Bjørn 1981, Aalaker 1987, Bergsvik 1991, Olsen 1992), and some important articles with inter-regional chronological or cultural historical perspectives have also been compiled (Indreid 1973 & 1978, Mikkelsen 1978, Madden 1983, Bjørk 1986, Nygaard 1990). However, a modern synthesis on the Mesolithic of Western Norway which includes the achievements of the two last decades and relates these to the Northwest European Mesolithic record is still to be written.

The Mesolithic settlement of West Norway — by virtue of remote geographical position, late deglaciation and relatively moderate landscape transformations — holds a potential for insight into cultural historical problems which may be far more difficult to investigate in most other parts of Northern and Western Europe. These problems are:

1. The process of colonization in formerly uninhabited areas, both coastal and inland.
2. The patterns of contemporaneous exploitation of food resources within a wide variety of landscape types.
3. The development of sedentariness and adoption of agriculture in the outer circumference of NW Europe.
4. Human adaptation to marine resources through time and gradually changing living conditions.

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